Quintana, Ileana (SBD)

From: Forhat-Diaz, Vivian (MDPR)
Sent: Thursday, July 14, 2011 12:11 PM
To: Quintana, Ileana (SBD)
Subject: FW: Pelican Harbor Marina Mooring Field
Attachments: 06-SPECIFICATIONS-6-14-11.pdf

Ileana please see below response from the Construction Supervisor and also the required experience (Items 1 to 3) See attached drawing.

Thanks,

Vivian Forhat-Diaz, EI,CGC, Park Construction Contract Specialist
Capital Program Division
Miami-Dade County Park & Recreation Department
(305) 755-5465 Phone
(305) 755-7840 Fax
www.miamidade.gov/parks
"Delivering Excellence Every Day"

From: Perez-Castañeda, Cesar
Sent: Wednesday, July 13, 2011 3:36 PM
To: Forhat-Diaz, Vivian (MDPR)
Cc: Forni, Jay (MDPR)
Subject: RE: Pelican Harbor Marina Mooring Field

Vivian,

ON THE BASE BID 63% is for the mooring field and 37% is for the dingy dock. All experience required is described in the specifications (sheet C-4) of the set of plans.

Cesar E. Perez-Castaneda, E.I., C.G.C. Construction and Renovation Specialist
Capital Programs Division
Miami Dade County, Park & Recreation Department
Ph: (305) 755-7853
"Delivering Excellence Every Day"

32,336.64
51,328 — 18,991.36

From: Forhat-Diaz, Vivian (MDPR)
Sent: Wednesday, July 13, 2011 11:32 AM
To: Perez-Castañeda, Cesar
Cc: Forni, Jay (MDPR)
Subject: Pelican Harbor Marina Mooring Field
Importance: High

Cesar, SBD is asking what percentage of the cost is for the mooring installation and what percentage is for the dinghy dock. Also, the RPQ does not mention marine experience required by the vendor. Please advise. Thanks,

Vivian Forhat-Diaz, EI,CGC, Park Construction Contract Specialist
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8. HELICAL SCREW ANCHORS SHALL MEET OR EXCEED THE FOLLOWING REQUIREMENTS, AS DOCUMENTED BY COMPLETE SUBMITTAL OF SYSTEM PRODUCT DATA AND SPECIFICATIONS:

A. MATERIAL: ASTM A576, GRADE 1530 MODIFIED.

CARBON:	0.28 - 0.34
MANGANESE:	1.4 - 1.6
VANADIUM:	0.16 - 0.18
NIOBIUM:	0.04 - 0.05
CHROMIUM:	0.20 MAX
MOLYBDENUM:	0.80 MAX

B. WELDING PROCESS: GMAW WITH ER705-3 AWS A5.18 SOLID WIRE.

C. CORROSION PROTECTION: HOT DIP GALVANIZED (ASTM A153).

D. HUB: 1-3/4-IN RCSQ SOLID SHAFT BY 84-IN LONG.

9. HELICAL SCREW ANCHOR BLADES:

A. SAND ANCHORS SHALL HAVE AT LEAST THREE (3) 3/8-IN THICK (MINIMUM) BLADES, OF EITHER 8-IN (MINIMUM), 10-IN, OR 12-IN DIAMETER, AS REQUIRED BY SITE CONDITIONS TO DEVELOP THE MINIMUM 18,000 LBS PULL-OUT CAPACITY, USING THE EXISTING SUBSTRATE SOILS UNDERLYING THE SITE.

B. ROCK ANCHORS SHALL HAVE AT LEAST TWO (2) 3/8-IN THICK (MINIMUM) BLADES OF 6-IN (MINIMUM) DIAMETER, AS REQUIRED BY SITE CONDITIONS TO DEVELOP THE MINIMUM 18,000 LBS PULL-OUT CAPACITY, USING THE EXISTING SUBSTRATE SOILS UNDERLYING THE SITE.

C. BLADE MATERIAL: ASTM A36 MODIFIED.

CARBON:	0.20 - 0.33
MANGANESE:	0.30 MIN.

10. ANCHOR EXTENSIONS AND TERMINATION HEAD:

A. WHERE THE SPECIFIED MINIMUM PULL-OUT CAPACITY FOR A SPECIFIC MOORING BUOY SYSTEM IS NOT ACHIEVED BY FULL EMBEDMENT OF THE BASE BID ANCHOR LENGTH (10-FT INTO SAND AND 6-FT INTO ROCK), THE ANCHOR EMBEDMENT SHALL BE ADVANCED FURTHER IN 3-FT MINIMUM INCREMENTS, UTILIZING ANCHOR EXTENSIONS.

B. ANCHOR EXTENSIONS SHALL BE COMPRISED OF MATED FITTINGS AT THE UPPER AND LOWER ENDS, ATTACHED TO THE UPPER END OF THE ANCHOR AND THE LOWER END OF THE ADDITIONAL ANCHOR EXTENSION. THE EXTENSION SHAFTS SHALL BE THE SAME SIZE, MATERIAL, AND RATED LOAD CAPACITY AS THE BASE BID ANCHOR SHAFT.

C. WHEN THE SPECIFIED MINIMUM PULL-OUT CAPACITY HAS BEEN ACHIEVED, TERMINATE WITH A HELMKEN MOORING ANCHOR TERMINATION FITTING.

11. DOWNLINE AND BUOY:

A. EACH MOORING BUOY SYSTEM SHALL BE PROVIDED WITH A MINIMUM OF A 1-1/4-IN DIAMETER DOWNLINE. TOTAL LENGTH OF DOWNLINE ASSEMBLY, INCLUDING ALL HARDWARE FROM THE BUOY WATERLINE TO THE SEA FLOOR, SHALL BE EQUAL TO THE MEAN HIGH WATER DEPTH PLUS A MINIMUM OF 2-FT. ANY NECESSARY EXTENSIONS TO THE DOWNLINE SHALL BE ASSEMBLED TO PROVIDE A (MINIMUM BREAKING STRENGTH OF 18,000 LBS) USING A MINIMUM OF A 1-IN POLY-PLUS ROPE, WITH 1-IN MINIMUM DEEP WELL GALVANIZED THIMBLES (ASTM A153) AND 3/4-IN MINIMUM GALVANIZED SAFETY BOLT TYPE SHACKLES (ASTM A153).

B. DOWNLINE SHALL BE CONNECTED BETWEEN TWO HEAVY-DUTY, GALVANIZED STEEL INTEGRAL THIMBLES (ASTM A153), SPLICED AS TERMINAL FITTINGS AND SHALL INCLUDE A MINIMUM OF A 5-FT LENGTH OF "STORMSOFT" RUBBER SHOCK ABSORBER (INDUSTRIAL RUBBER MULTI-STRAND CORDS THAT ALLOW LIMITED STRETCH TO ABSORB SHOCK LOADS), OR ENGINEER APPROVED EQUAL, AND A HEAVY DUTY UNDERWATER FLOAT, OF SUFFICIENT SIZE TO KEEP DOWNLINE OFF OF THE SEA FLOOR, SUITABLE FOR THE SPECIFIC SITE CONDITIONS. THE DOWNLINE SHALL REQUIRE A MINIMUM OF A 3/4-IN GALVANIZED SAFETY BOLT TYPE SHACKLE (ASTM A153), AT EACH END.

C. BRAIDED HIGH-STRENGTH POLYESTER DOWNLINE SHALL NOT ABSORB WATER AND SHALL RETAIN 100 PERCENT OF ITS 18,000 LBS MINIMUM DRY BREAKING STRENGTH, FOR EACH MOORING BUOY SYSTEM.

D. TWO HEAVY-DUTY GALVANIZED STEEL THIMBLES (ASTM A153) SHALL BE SIZED TO MEET OR EXCEED THE SPECIFIED MINIMUM 18,000 LBS DESIGN CAPACITY.

E. 18-IN SPHERICAL, WHITE PVC BUOY WITH REFLECTIVE STRIPE (COLOR SHALL CORRESPOND TO THE MOORING TYPE SPECIFIED) AND 1-IN MINIMUM THROUGH-BUOY HOLE. BUOY MANUFACTURER SHALL BE EITHER "EMI BUOY" OR "CAROLINA WATERWORKS BUOY", OR ENGINEER APPROVED EQUAL. PROVIDE A THROUGH-BUOY LINE CONSISTING OF A 1-IN MINIMUM THREE-STRAND POLY-PLUS LINE AFFIXED AT THE UPPER END OF THE 1-IN THROUGH-BUOY HOLE WITH A BACK SPLICE AND AN EYE-SPLICE BENEATH THE BUOY. THE EYE SHALL BE CHAFE GUARDED WITH RED 1-1/4-IN GOODYEAR HORIZON RUBBER CHAFING HOSE AND ATTACHED TO A 1-IN MINIMUM EYE-TO-EYE SWIVEL WITH A 1-1/4-IN MINIMUM GALVANIZED SAFETY BOLT TYPE SHACKLE (ASTM A153).

12. MOORING UNIT PENDANT (PICK-UP LINE):

1-IN MINIMUM DIAMETER THREE-STRAND NYLON LINE 8-FT LONG, BETWEEN EYE-SPLICED ENDS. VESSEL END OF PENDANT SHALL BE EYE-SPLICED AROUND A 2-1/2-IN MINIMUM NYLON SEADOG THIMBLE. PENDANT FLOAT SHALL BE KEPT IN PLACE, AS CLOSE AS PRACTICAL TO THE NYLON THIMBLE. LOWER END OF PENDANT SHALL BE EYE-SPLICED AROUND A 1-IN MINIMUM GALVANIZED DEEP WELL THIMBLE (ASTM A153). THE ROPE INSIDE THE THIMBLE SHALL BE COVERED BY A 1-IN BLACK CORDURA CHAFE HOSE AND THE SPLICED ROPE SHALL BE COVERED BY A 2-1/2-IN BY 24-IN LONG BLACK CORDURA CHAFE HOSE. THE 24-IN CHAFING HOSE SHALL RUN UP FROM THE LOWER EYE-SPLICE, TO GUARD AGAINST CHAFING FROM THE SWIVEL AND SHACKLES.

PELICAN HARBOR FLOATING DINGHY DOCK:

1. FLOATING DINGHY DOCK SHALL BE INCLUDED AS PART OF BASE BID AND ALTERNATE BIDS.

ENVIRONMENTAL PERMITS:

1. BIDDER SHALL COMPLY WITH ALL ENVIRONMENTAL PERMIT GENERAL AND SPECIFIC CONDITIONS REGARDING TURBIDITY CONTROLS, WATER QUALITY AND MANATEE PROTECTION DURING CONSTRUCTION.

PELICAN HARBOR MOORING FIELD BUOY SYSTEM SPECIFICATIONS:

1. MOORING FIELD CONTRACTOR SHALL BE REGULARLY ENGAGED IN THE BUSINESS OF INSTALLING MOORING FIELD,BUOY SYSTEMS AND HELICAL ANCHORS FOR PROJECTS OF SIMILAR SIZE, SCOPE, AND COMPLEXITY. CONTRACTOR SHALL BE A HELICAL ANCHOR MANUFACTURER'S CERTIFIED HELICAL ANCHOR INSTALLER AND SHALL BE CERTIFIED BY THE ASSOCIATION OF DIVING CONTRACTORS, OR EQUIVALENT ORGANIZATION, IN COMPLIANCE WITH USCG AND OSHA REGULATIONS. ,

2. CONTRACTOR SHALL DEMONSTRATE ITS RELATIVE MOORING FIELD AND HELICAL ANCHOR INSTALLATION EXPERIENCE BY SUBMITTING, AS PART OF ITS BID PACKAGE, REFERENCES AND RELATED PROJECT DOCUMENTATION, FOR A MINIMUM OF THREE MOORING FIELD PROJECTS OF SIMILAR SIZE, SCOPE, AND COMPLEXITY HAVING BEEN SUCCESSFULLY COMPLETED WITHIN THE LAST 10 YEARS.

3. PROJECT DOCUMENTATION SHALL INCLUDE AT A MINIMUM A DETAILED INVENTORY OF CONTRACTOR OWNED EQUIPMENT SPECIFICALLY USED FOR INSTALLING HELICAL ROCK ANCHORS, SUCH AS: HYDRAULIC JACK-UP BARGE WITH SUFFICIENT DOWNWARD PRESSURE TO INSTALL THE ANCHORS INTO COMPETENT ROCK, DIVE BOAT AND SUFFICIENT DIVE EQUIPMENT FOR A CERTIFIED COMMERCIAL THREE-MAN DIVE CREW; AND COPIES OF THE COMMERCIAL DIVERS' CERTIFICATES, THE ASSOCIATION OF DIVING CONTRACTORS' CERTIFICATE, AND THE ANCHOR MANUFACTURER'S CERTIFIED HELICAL ANCHOR INSTALLER CERTIFICATE.

4. SUBMIT ICC APPROVAL CERTIFICATE FOR ICC EVALUATION SERVICE, INC'S - AC358 "ACCEPTANCE CRITERIA FOR HELICAL FOUNDATION SYSTEMS AND DEVICES", OR PROVIDE PROOF OF ICC-ES APPLICATION NUMBER IN PROCESS. ANCHORS SHALL BE TESTED AT AN IAS ACCREDITED LAB TO ICC AC358 "ACCEPTANCE CRITERIA FOR HELICAL FOUNDATION SYSTEMS AND DEVICES", AND WITH ONGOING QUALITY CONTROL PROGRAM PER AC10, WITH INSPECTIONS BY AN IAS ACCREDITED INSPECTION AGENCY PER AC98.

5. BASIS OF BIDS:

A. OWNER DID NOT UNDERTAKE A GEOTECHNICAL FIELD EXPLORATION PROGRAM. THEREFORE, THERE IS NOT A GEOTECHNICAL REPORT, WITH SOIL BORING LOGS AND HELICAL ANCHOR DESIGN PARAMETERS AVAILABLE FOR THE SITE.

B. OWNER WILL OBTAIN AND PROVIDE TO THE CONTRACTOR THE FEDERAL, STATE, COUNTY, AND LOCAL PERMITS NEEDED FOR CONSTRUCTION OF THE PELICAN HARBOR MOORING FIELD BUOY SYSTEMS AS FOLLOWS:

1. U.S. ARMY CORPS OF ENGINEERS - INDIVIDUAL PERMIT (IP).
2. FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION - ENVIRONMENTAL RESOURCE PERMIT (ERP).
3. MIAMI DADE COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCE MANAGEMENT - MD DERM CLASS 1 PERMIT.
4. CITY OF MIAMI BUILDING DEPARTMENT - BUILDING PERMIT.

C. EACH MOORING BUOY SYSTEM SHALL BE LOCATED WITHIN THE MOORING FIELD USING THE GEOGRAPHIC COORDINATES SHOWN ON DRAWING C-1, IN COMPLIANCE WITH ALL PERMITS. FINAL LOCATION OF EACH MOORING BUOY SYSTEM ANCHOR ON THE SUBSTRATE, OR BAY BOTTOM, SHALL BE DETERMINED BY A CONTRACTOR PROVIDED COMMERCIAL DIVE TEAM, SUCH THAT EACH ANCHOR SHALL NOT BE WITHIN 2-FT OF THE PRESENCE OF SEAGRASSES. SEE THE PERMIT CONDITIONS OF THE FEDERAL, STATE, COUNTY, AND LOCAL PERMITS ISSUED FOR THE PROJECT.

D. BIDDER SHALL BE RESPONSIBLE FOR DETERMINING THE TYPE (SAND OR ROCK) HELICAL ANCHORS, THE SIZE AND QUANTITY OF HELICAL PLATES, AND THE REQUIRED LENGTH OF ANCHOR EMBEDMENT INTO THE SUBSTRATE (SAND OR ROCK), FOR EACH MOORING BUOY SYSTEM INSTALLED.

E. BIDDER SHALL BE RESPONSIBLE FOR PROVIDING A QUALITY CONTROL LOAD TESTING PROGRAM, CONSISTING OF AT LEAST ONE (1) LOAD TEST OF BASE BID SCREW ANCHORS AND ONE (1) LOAD TEST OF BID ALTERNATE #1 SCREW ANCHORS. INSTALLED HELICAL SCREW ANCHORS, BOTH SAND AND ROCK, SHALL BE PULL-OUT EXTRACTION LOAD TESTED TO AT LEAST 18,000 LBS AND SHALL BE HELD AT A CONSTANT LOAD WITHOUT DISPLACEMENT, FOR AT LEAST FIVE (5) MINUTES. LOAD TEST RESULTS; INCLUDING AS A MINIMUM THE BUOY NUMBER AND LOCATION (GEOGRAPHIC COORDINATES), LOAD READINGS OVER THE DURATION OF THE TEST, DISPLACEMENTS, TIME); SHALL BE LOGGED AND LOGS SUBMITTED TO THE ENGINEER.

F. BIDS SHALL BE BASED ON PROVIDING A MINIMUM OF 10-FT ANCHOR EMBEDMENT INTO THE SUBSTRATE (SAND OR ROCK). CONTRACTOR SHALL CONTINUE TO ADD ANCHOR EXTENSIONS UNTIL THE REQUIRED TORQUE NEEDED TO DEVELOP A MINIMUM PULL-OUT CAPACITY OF AT LEAST 18,000 LBS HAS BEEN OBTAINED.

G. IF HARD ROCK IN ENCOUNTERED, CONTRACTOR SHALL PRE-BORE THE ROCK AS REQUIRED, TO ACHIEVE THE MINIMUM 6-FT OF COMPETENT ROCK EMBEDMENT. IF SOFT ROCK IS ENCOUNTERED, CONTRACTOR SHALL ADVANCE THE ROCK ANCHOR THE REQUIRED DEPTH INTO THE SOFT ROCK AND THEN GROUT THE HOLE WITH CEMENTITIOUS GROUT (SPECIFICALLY FORMULATED FOR UNDERWATER GROUTING), TO DEVELOP A MINIMUM PULL-OUT CAPACITY OF AT LEAST 18,000 LBS.

H. BIDDER SHALL SUBMIT A BASE BID TOTAL COST FOR PROVIDING THE TEN (10) INDICATED BASE BID OF MOORING BUOY SYSTEMS COMPLETE, BASED ON PROVIDING A MINIMUM OF 10-FT HELMKEN HELICAL SCREW ANCHOR EMBEDMENT INTO THE SUBSTRATE (SAND OR ROCK), WITH AT LEAST 6-FT OF THE 10-FT EMBEDMENT INTO COMPETENT ROCK IF ENCOUNTERED TO DEVELOP A MINIMUM PULL-OUT CAPACITY OF AT LEAST 18,000 LBS. FAILURE TO SUBMIT A BASE BID TOTAL COST SHALL BE DEEMED NON-RESPONSIVE AND THE BIDDER WILL BE DISQUALIFIED TO BID.

I. BIDDER SHALL SUBMIT A BID ALTERNATE #1 TOTAL COST FOR PROVIDING THE SEVENTEEN (17) INDICATED BID ALTERNATE #1 MOORING BUOY SYSTEMS COMPLETE, BASED ON PROVIDING A MINIMUM OF 10-FT HELMKEN HELICAL SCREW ANCHOR EMBEDMENT INTO (SAND OR ROCK), WITH AT LEAST 6-FT OF THE 10-FT EMBEDMENT INTO COMPETENT ROCK IF ENCOUNTERED TO DEVELOP A MINIMUM PULL-OUT CAPACITY OF AT LEAST 18,000LBS. FAILURE TO SUBMIT A BID ALTERNATE #1 TOTAL COST SHALL BE DEEMED NON-RESPONSIVE AND THE BIDDER WILL BE DISQUALIFIED TO BID.

J. BIDDER SHALL SUBMIT AN ADDITIVE UNIT COST #1 TO PROVIDE ONE LINEAL FOOT (1 LF) OF ADDITIONAL HELMKIN HELICAL SCREW ANCHOR EMBEDMENT INTO SAND, TO DEVELOP THE MINIMUM PULL-OUT CAPACITY OF 18,000 LBS. THIS ADDITIVE BID ITEM UNIT COST WILL BE APPLIED TO HELICAL SCREW ANCHOR EXTENSIONS INTO SAND DEEPER THAN 13-FT, UNTIL THE MINIMUM 18,000 LBS PULL-OUT CAPACITY IS OBTAINED.

K. BIDDER SHALL SUBMIT AN ADDITIVE BID UNIT COST #2 TO PROVIDE ONE LINEAL FOOT (1 LF) OF ADDITIONAL HELMKEN HELICAL ROCK CUTTING ANCHOR EMBEDMENT INTO COMPETENT ROCK, TO DEVELOP THE MINIMUM PULL-OUT CAPACITY OF 18,000 LBS. THIS ADDITIVE BID ITEM UNIT COST WILL BE APPLIED TO ROCK CUTTING ANCHOR EXTENSIONS INTO COMPETENT ROCK DEEPER THAN 13-FT, UNTIL THE MINIMUM 18,000 LBS PULL-OUT CAPACITY IS OBTAINED.

L. BIDDERS SHALL SUBMIT ITEMS 1 - 4 ABOVE AS PART OF BID.

6. EACH MOORING BUOY SYSTEM SHALL INCLUDE A HELMKEN HELICAL SCREW ANCHOR (EITHER SAND OR ROCK TYPE), A DOWNLINE, A BUOY, AND A PENDANT. THE GENERAL MOORING BUOY CONFIGURATION SHALL BE AS SHOWN IN THE DRAWINGS. ALL PROPOSED EQUIVALENT HELICAL SCREW ANCHORS SHALL BE APPROVED BY THE ENGINEER. SUBMITTALS OF PROPOSED EQUIVALENT HELICAL SCREW ANCHORS SHALL INCLUDE COMPLETE PRODUCT SPECIFICATION SHEETS, A DETAILED EXPLANATION OF THE PROPOSED PRODUCT SUBSTITUTION AS COMPARED WITH THE HELMKEN ANCHOR SPECIFIED, AND ALL SPECIFIED CERTIFICATIONS AND TEST DATA.

7. ANCHOR HEAD SHALL BE SECURED TO THE ANCHOR AND SECURELY RETAIN THE DOWNLINE WITH FREEDOM FOR THE SPECIFIED SWIVEL, DOWNLINE, BUOY, AND MOORED VESSEL TO ROTATE AROUND THE VERTICAL AXIS OF THE ANCHOR. THE MOORING BUOY SYSTEM SHALL BE INSTALLED SUCH THAT THE MAXIMUM SWING RADIUS OF 50LF AS SPECIFIED AND SHALL NOT BE EXCEEDED, TAKING INTO CONSIDERATION WATER LEVELS AND TIDE VARIANCE ANTICIPATED AT THE SITE. REFER TO THE DRAWINGS FOR DETAILS OF DESIGNATED SWING RADII, BOAT LENGTHS, AND DESIGN ANCHORAGE CAPACITIES FOR EACH MOORING.

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	–	–	–

DESIGNER: _____
DRAWN BY: _____
CHECKER: _____
SCALE: 1" = 30'

CH2MHILL
3001 PGA BOULEVARD, SUITE 300
PALM BEACH GARDENS, FLORIDA 33410
ENGINEERING BUSINESS No. EB0000072
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No.